

UK EXPERIENCE WITH "ROBENS STYLE LEGISLATION"

I INTRODUCTION

1. The British system of industrial safety has 19th century origins. The first Inspectors of Factories were appointed in 1830 and the first Inspectors of Mines in 1842. Their duties were originally connected with welfare and industrial relations, and only after about 1870 did safety emerge as the predominant specialism. In 1865 the first Inspectors of Pollution (Alkali Inspectors) were appointed and in 1875 the first Inspectors of Explosives. This effectively marked the first recognition of the fact that what happens inside an industrial establishment can have consequences outside it, either upon the natural environment or upon the public. The Alkali Inspectors were appointed because of the effects of sulphur around cotton mills; and the Explosives Inspectorate after some major explosions in explosives factories had also wrecked the surrounding areas.
2. Present legislation in Britain stems from a report of a committee chaired by Lord Robens from 1970-72 entitled Safety and Health at Work. In the general summary to the report it was advocated, inter alia, that -

"A more effective self-regulatory system is needed. Reform should be aimed at two fundamental and closely related objectives. First, the statutory arrangements should be revised and reorganized to increase the efficiency of the State's contribution to safety and health at work. Secondly, the new statutory arrangements should be designed to provide a framework for better self-regulation".

The report went on to say:

"A National Authority for Safety and Health at Work should be set up".

"The Managing Board of the Authority should be composed of people drawn from relevant fields of experience and interest".

"The existing statutory provisions should be replaced by a comprehensive and orderly set of revised provisions under a new enabling act supported by non-statutory codes of practice, with emphasis on the latter".

The inspectorates were also the subject of the recommendation and it was thought that they should be brought together "to form a unified service ... the provision of expert and impartial advice and assistance to industry should be the basic function of the unified inspectorates".

3. Due cognizance was taken of the report which forms the basis of much of the present British system which dates from 1974, when the attempt was made to unify the whole system of industrial safety, bringing together all the major inspectorates dealing with the consequences of industrial harm either to workers or more widely, and unifying the existing law which consisted of some 30 statutes and more than 500 sets of regulations. This mass of old law was to be replaced by modern regulations under a single new Act, "The Health and Safety at Work etc. Act 1974" in such a way that standards of safety were to be maintained or improved. The new regulations were to be set out in terms of general principles, with subordinate details set out in codes and guidance which would allow room for adaptation to technological change.

4. The new Act created a Health and Safety Commission (HSC or the Commission) which assumed policy responsibilities, including those of proposing health and safety law, of carrying out relevant research, and of informing industry and the public about its activities. The Commission (Annex 1) which comprises 10 people representing employers, employees' organizations, local authorities, and the general public, is obliged to consult widely before putting forward proposals. It also takes care to obtain the best technical advice. In effect, this means that the Commission acts only after satisfying itself that the main interests concerned understand and will accept and put into effect its proposals; this is its very great strength.
5. The Commission's main instrument is the Health and Safety Executive, (HSE or the Executive), which was separately created under the Act. In addition to advising and acting for the Commission in most matters, HSE (which includes the Mines Inspectorate) is responsible for enforcement of safety law (except where others eg local authorities are made responsible), and does so through its own inspectorates and agents.
6. Certain areas of industrial and technological hazard have been excluded or partly excluded from the Commission's remit. These include for example consumer and food safety, most forms of non-works transport (except where hazardous goods are conveyed); and in 1985 it was decided also that environmental pollution should be dealt with separately, though the Commission retains some relevant responsibilities.

II STATUTORY DUTIES AND RESPONSIBILITIES

7. In addition, the Executive absorbs information through its inspection and research functions, and its officials are very active in propagating good practice through industrial, professional and standards making bodies. The Executive services and in many cases chairs the Commission's Advisory Committees and also many of the informal groups set up to deal with particular matters. This consultative process in which all the industrial parties are involved brings together technical and scientific knowledge with practical experience.
8. Duties The main principle of operation of the HSWA is to lay the responsibility for safety*¹ at work, and for the protection of the public from the consequences of work activity, upon anyone conducting an enterprise. The Act is part of the criminal law, but it is based upon the civil duty of care, and imposes general duties, eg to maintain a safe workplace (Section 2), to protect the public (Section 3), to design and supply goods that are safe (Section 6), or upon workers, to cooperate with their employers in taking care (Section 7). Consequently, the position of the Commission and Executive is that of stimulating or compelling others to fulfil their duties, and giving them guidance and help.
9. Reasonable practicability The duties in the Act are to do what is "reasonably practicable". The concept of "reasonable practicability" runs through the whole of safety regulation as applied by the Commission and its agents. In law, to do what is "reasonably practicable" means to proceed in the direction of safety until the cost of some further action would be in gross disproportion to the risk, ie to the safety benefit expected. It also involves conforming to specified standards that are widely regarded as constituting good practice.

*¹ The term "safety" refers generally throughout the paper to "health and safety".

III THE RISK ASSESSMENT APPROACH

10. The principle of reasonable practicability in effect means that two things are central to the regulation of health and safety. The first is to establish and enforce good practice; and the second is to assess risk, and proportion new measures of control to such assessments. In many cases risk can be assessed either on the basis of experience, or of statistical or epidemiological knowledge, or through research and the collection of evidence in such matters as dose and harm. The idea that the safety response should not be exaggerated, but must in some manner be proportionate to the risk is essential, and clearly a numerate approach to this must be adopted wherever practicable.

11. A numerate approach has some difficulties. Much of the information on the basis of which risks can be quantified is unreliable or subject to dispute, and sometimes requisite statistics are lacking; as for example in the field of occupational health, where it is often not possible to know whether an individual case of illness was or was not attributable to an industrial cause. There is also a conceptual difficulty in (1) comparing hazards that produce serious day to day effects involving individuals, (2) those that may produce catastrophic effects but with low frequency, and (3) those (such as industrial dermatitis) where the effect is undramatic but which may be extremely widespread and in aggregate damaging. Nevertheless in Great Britain, quantified risk assessment is an important element in producing a balanced decision on the precautions to be applied to reduce the components of the overall risk particularly where major hazards are concerned, and for prioritising or targetting control measures. However, there are many cases where a qualitative assessment is applicable and this applies to much of the practical hazards associated with mining.

IV REGULATORY TECHNIQUES

12. Licensing regimes are applied only where the risk is acute (eg explosives), or sometimes where society demands a very high level of intervention by the regulator (eg nuclear reactors or asbestos stripping). The conditions of a licence may be varied by the regulator, sometimes without right of appeal by the licensee.
13. Approval by the regulator is a term normally applied to the design of particular items of safety related plant for which specific standards and protocols are either lacking or imprecise, so that they cannot easily be made the basis for general certification schemes. Examples include certain forms of personal protective equipment, certain plant used in mining and for carrying loads and - in effect - electrical equipment for use in highly hazardous atmospheres.
14. Design or Systems Assessment
- The principal and most binding form of design assessment required by the Executive is in respect to nuclear installations. A main output of the design assessment is the preparation of a detailed safety case for the installation in question. The safety case assesses the risks posed by the installation, considers precautionary action which management should take and helps establish rules for its operation. The safety case helps the regulator to determine inspection priorities and targets and can be made the basis of comprehensive audit or review at any time chosen by the regulator.
15. Design assessment has always been carried out in other hazardous industries, eg the oil and chemical industries. Under the provisions of the Control of Industrial Major

Hazards Regulations (CIMA), operators of scheduled plant have to produce safety reports which as in the nuclear industry, provide a basis for future inspection.

V SUBORDINATE INSTRUMENTS

16. The regulatory techniques discussed above imply a very close and detailed scrutiny by the regulator, generally accompanied by strict systems of subsequent control. They are therefore reserved only for very important hazards. In general, the method used is to lay down requirements which are enforced if necessary in the courts rather than through eg the threat of withdrawal of a licence. These are summarized below.
17. Regulations under HSWA are necessary only where in some particular respect, the general requirements of the Act need to be spelled out in a mandatory way - that is to say where there is to be a principle of action or a strict requirement of some detailed kind as for example that a mine must have more than one exit.
18. Codes and Guidance. The subordinate detail - as for example the kind of precautions to be taken to prevent simultaneous blockage of the ways out of a mine are then laid down as guidance. But this guidance can be strict. For example there is provision for the approval of codes of practice (ACOP). Although failure to observe any provision of an ACOP is not in itself an offence, that failure may be taken by a court in criminal proceedings as proof that a person has contravened a regulation or section of the HSWA Act to which it relates. But though approved codes have this special significance, all forms of authoritative guidance and particularly those issued as part of a package of new law are

likely to be admitted as part of expert evidence given by the inspectors in the event of court proceedings.

19. Product or process standards, which very often have an important safety dimension, are nowadays usually established in international discussion, in which HSC/E plays a very large part eg CEN or CENELEC, the European standards bodies. Such standards may be made mandatory, or they may be referred to in other authoritative documents, for example in codes and guidance. The Executive from time to time publishes lists of standards which it regards as expressing good safety practice, ie as representing what is reasonably practicable.
20. All the instruments discussed above in one sense or another amount to official, widely available, statements as to good industrial practice that will as necessary be enforced.

VI INSPECTION STRATEGY

21. In Britain an inspector's immediate purpose in visiting an establishment is to see whether systems exist that are likely to lead to the identification and prevention by management of significant faults, and that management has the right attitude. Of course, the inspection may and probably will lead to faults being found and to further inspections to ensure that these have been rectified; and it could lead to legal action where there has been wilful disregard of reasonable precautions. But the responsibility is and remains with the employer; it is not the inspector who produces safety.
22. The staff of the Mines Inspectorate are of course not the only inspectors who visit a mine. Thorough inspections of

parts of plant critical to safety (eg pressure vessels, lifting machinery) are required by law and are often carried out by insurance companies, some of whom maintain quite extensive advisory/inspection systems whose findings influence the premiums they charge. In addition, large firms maintain their own safety staff who carry out inspections.

23. HSE's Inspectorates are of two kinds:-

(a) those (nuclear, mines, explosives) which concentrate on particular industries, who are generally recruited from highly qualified people with experience of the industry itself.

(b) those inspectorates (particularly factories and agriculture) which cover the generality of industry. Individual inspectors are educated to University degree level, and in most but not all cases possess technical degrees or qualifications; and all receive very substantial initial training.

24. The frequency of inspection depends on the degree of risk and increasing use of hazard assessment is undertaken to aid the inspectorates in directing their resources.

25. Advice and enforcement. There are two aspects to an inspector's work:-

(a) an inspector sees a wide variety of plant and is therefore in an excellent position to induce and spread good practice, ie to proffer advice.

(b) an inspector is able to enforce the law at his discretion.

These two aspects are inseparable and the art of inspection consists of achieving a proper balance between them.

26. If the inspector decides on enforcement, he may either take the employer to court or else issue an improvement notice or prohibition notice. Both forms of notice are subject to appeal to industrial tribunals. They are extremely effective, and are more commonly applied than prosecution.
27. In deciding whether to go to a court HSE consider principally the gravity of the offence including whether there has been knowing or persistent breach of safe practice; the severity of the possible consequences; the general record and approach of the offender and whether it is necessary to draw the public's attention to particular hazards or to advertise HSE's willingness to take a hard line in relation to them. The decision is usually left to the professional discretion of inspectors who have seen the situation for themselves.

VII SPECIALIST BACK-UP

28. The Mines Inspectors in the field are able to call for help from HSE's technological, medical and scientific specialists including the forensic capabilities of the Research and Laboratory Services Division. The specialist inspectors and scientists do not lead in inspection or investigation, but are called in to give expert opinion on particular matters and may be called to give expert evidence in court.

VIII THE MANAGEMENT OF SAFETY

29. As explained the Health and Safety Commission's approach is in essence that it is for the regulator to provide a statutory framework of rules, and regulations, but that health and safety is the responsibility of managers. Studies by HSE show that a very high proportion of accidents are easily preventable by management action.
30. Much attention is now paid to encouraging the development within firms of a "safety culture" consisting of the following elements:-
- (a) the acceptance of responsibility at and from the top, exercised through a clear chain of command, seen to be actual, and felt throughout the organisation;
 - (b) a conviction that high standards are achievable through proper management;
 - (c) setting and monitoring of relevant objectives/targets, based upon satisfactory internal information systems;
 - (d) systematic identification and assessment of hazards and the devising and exercise of preventive systems which are subject to audit and review.
 - (e) immediate rectification of deficiencies;
 - (f) promotion and reward of enthusiasm and good results.
31. Where this approach has been adopted the management believe their safety programmes to be cost effective, by reducing accident rates, reducing lost time, improving employee satisfaction and promoting sound industrial discipline.

32. Human Factors It is now widely accepted that most accidents at some point involve acts of commission or omission by people. The proper control of human error involves the assumption that people will make mistakes but that by thought, design and proper motivation this can be made less likely and the consequences mitigated. HSE has been actively involved in recent years in considering human factors and in particular in the part played by human factors in the incidence of risk in industry, and the reduction of that risk. In late 1987 the Advisory Committee on the Safety of Nuclear Installations (ACSNI) established a study group on the subject and the group has recently produced its final report in a series of three which refer to training and related matters, human reliability and aspects of organising for safety. The recent report has considerable relevance for many industries, including mining. The report focuses on the need for an organisation to "own" safety and for this to be integral within the safety culture and every aspect of the organisation's work.
33. The European Community (EC) now drives much of the current work on legislation. The EC developed from the European Coal and Steel Committees of the early 1950's and has produced a number of directives similar to HSWA. In these directives there are requests for employers to make risk assessments. The employers must identify the hazards and assess the risk and then take action to eliminate or control the risk. It is anticipated that this approach will encourage industry to plan health and safety, and not merely react as a result of an incident. Regulations came into force in 1992 entitled "The Management of Health and Safety at Work" and are supported by an Approved Code of Practice. Additionally, HSE has published a number of documents providing general guidance and these include "Successful Health and Safety Management" and "The costs of Accidents at Work".

CONCLUSION

34. It is believed that the system of industrial safety in Britain is among the foremost of those being applied in Europe and that it offers a high degree of protection to both workers and others who may be affected by industrial processes. HSE plays a leading role within the European Community, at the International Labour Organization and elsewhere in promoting international regulation of health and safety. The international consequences of major industrial accidents, for example that at Seveso, confirm that industrial safety is now a subject upon which international collaboration is more and more essential, both for humanitarian reasons and because we must be confident in the efforts that our international neighbours are making, as well as in our own.

References:-

The Cost of Accidents at Work published by HSE
part of Health and Safety Series HS(G)96
ISBN 0 11 8863746

Successful Health and Safety Management HS(G)65
ISBN 0 11 8859889

The Advisory Committee on the Safety of Nuclear
Installations Third Report
ISBN 0 11 8821040

ANNEX 1CHAIRMAN AND MEMBERS OF THE
HEALTH & SAFETY COMMISSION - 1992/93CHAIRMAN

The Chairman of the Health and Safety Commission is appointed by the Secretary of State for Employment.

Sir John Cullen F.Eng., Ph.D has been Chairman since October 1983. He was in industry for 27 years, becoming European Director for Regulatory Affairs, Engineering and Health and Safety for ROHM and HAAS Limited.

MEMBERS

Members of the Health and Safety Commission are appointed by the Secretary of State for Employment after consultation with organisations representing employers, employees, local authorities and others as he/she thinks appropriate.

Councillor Eddie Carrick is Chairman of the Leisure and Recreation Committee, Vice Chairman of Staffing Committee of Stirling District Council and Vice Convenor of the Convention of Scottish Local Authorities' Environmental Services Committee. He has also been involved in safety standards and training in the construction industry.

Paul Gallagher has been President since 1987 of the Electrical, Electronic Telecommunications and Plumbing Union and is now General Secretary. He has wide negotiating experience in industry including engineering, contracting, local authorities and chemicals etc.

Peter Jacques, CBE is Special Adviser to the TUC for matters including health, safety and environmental protection at work and is also a member of the Royal Commission on Environmental Pollution. He has been a member of the Health and Safety Commission since October 1974.

Nigel J Pitcher is a chartered engineer with wide experience in the contracting industry from petrochemical plants to motorways. He is a director of several Laing Group companies including Laing Engineering Limited and John Laing Construction.

Rex H. M. Symons was Deputy Chairman of Merck Holdings Limited from 1989 to 1991 and Managing Director of British Drug Houses Limited from 1980-89. He acts as the CBI's workplace health and safety consultant and is the Chairman of the Dorset Training and Enterprise Council.

Alan Tuffin is General Secretary of the Union of Communication Workers and a member of the TUC General Council. He is Chairman of the TUC's Social Health and Environment Committee. He has been a member of the Health and Safety Commission since October 1986.

Dame Rachel Waterhouse is the former Chairman of the Consumers Association. Currently council member, Association for Consumer Research; Chairman, Research Institute for Consumer Affairs; and President, Institute of Consumer Ergonomics. She has wide experience in consumer and social affairs, with a special interest in health and safety matters.

Christopher Chope, OBE is a consultant for Ernst and Young and formerly a Minister at the Departments of Environment and Transport. He has a great deal of experience of local government having been a member of Wandsworth Borough Council from 1974 to 1983 and Council Leader from 1979.

Dr Geraldine Schofield is a senior microbiologist at Unilever Research. She is Project Leader on Expert Computer Systems in Microbiology, and has special responsibility for regulatory affairs in biotechnology. She belongs to the National Microbiological Consultative Committee on Safety, as well as the Chemical Industries Association Biotechnology task force.